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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,213	10/06/2003	Giorgio Cantello	Q77101	2384

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EXAMINER

MARC, MCDIEUNEL

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/678,213

Applicant(s)

CANTELLO ET AL.

Examiner

McDieunel Marc

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) all is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-25 are presented for examination.
2. The preliminary amendment filed on 10/06/2003 had been entered.

3. The objection to the abstract is withdrawn.

The objection regarding the word "characterised" is withdrawn.

The objection to claims 5, 6, 12 and 23 is withdrawn.

The rejection to claims 1-25 under provisional obviousness-type double patenting is maintained.

The rejection to claims 1-5, 12 and 24-25 as best understood under 35 U.S.C. 102(e) as being anticipated by **Grob et al.** (U.S. Pat. No. 6,356, 806 B1) is maintained.

The objection to claims 6-11 and 13-23 is maintained.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In*

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re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-27 of copending Application No. 10/678,270. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of this application which are broad encompass the claims of the copending application which are specific.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Regarding claim 1, the phrase "such as" [or similar] in line 4 renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Dependent claims not specifically rejected are rejected as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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10. Claims 1-5, 12 and 24-25 as best understood are rejected under 35 U.S.C. 102(e) as being anticipated by **Grob *et al.*** (U.S. Pat. No. 6,356, 806 B1).

As per claim 1, **Grob *et al.*** teaches a portable control, program and/or teach terminal provided (see fig. 1, element 11, being on considered as a (teaching pendant)¹⁾ for the connection to a control unit (5) (see fig. 1, elements 3 and 12, wherein the control card being considered as part of the PC) of movements according to multiple axes of an automatic apparatus (1) (see fig. 1, element 2) bearing a tool (4), such as a robot or similar (see fig. 2, col. 3, lines 37-39, which being used for gluing and welding tools), the terminal (6) having a longitudinally extended body defining a first portion (10) and a second portion (11) comprising an area of union to the first portion (10) (see fig. 1, element 11, wherein the pendant has been shown evidence of longitudinal extended body, based on its rectangular shape, a top and bottom portion which being considered as first and second portion and the center keys being considered as the area of union), wherein in correspondence with a front side of the first portion (10) a display device (D) is provided and in correspondence with a front side of the second portion (11) a multiplicity of keys is provided, (see fig. 1) said multiplicity comprising: a plurality of motion keys (14) able to be operated manually to provide the control unit (5) with a respective command signal for the apparatus (1) (see fig. 1, elements 11, 12 and 3, wherein pictorially element 11, contains a plurality of keys), the command signal being aimed at causing the tool (4) to execute a rotation or a translation motion about or along an axis corresponding to the operated motion key (14) (see fig. 1, element 11, bear in mind the device being used to train the robot), a plurality of teaching keys (15-24, 26), able to be operated manually for programming the control unit (5) and/or controlling the apparatus (1) and/or storing a position (see fig. 1, particularly the teaching pendant “ 11”) reached by a predefined point (TCP) of the tool (4) as a result of a motion of the

¹ **Teaching Pendant** = A hand-held **teaching pendant** for training a robot. A point-to-point robot that can be programmed from a teaching pendant.

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apparatus (1) (see fig. 1, wherein TCP² being covered while teaching the robot), characterised in that the second portion (11) of the body of the terminal (6) (see fig. 1, element 11) has a width which progressively decreases until reaching said area of union (progressively decreases being considered as design choice, in fact Grog' s *et al.* design type contains a strip-shape hump), at least one between said plurality of motion keys (14) and said plurality of teaching keys (15-24, 26) comprises a first and a second series of keys (14) being positioned each along a respective longitudinal side of the second portion (11) (see fig. 1, element 11, particularly the keys), preferably in a substantially symmetrical fashion to each other (see fig. 1, element 11, wherein the keys being placed in a symmetrical fashion), and the other between said plurality of motion keys (14) and said plurality of teaching keys (15-24, 26) (see fig. 1, element 11, particularly the keys being considered as movements and/or function keys, which being interpreted broadly, that is motion to any direction *etc.*) comprises a group of keys (15-22, 26) being positioned within or close to said area of union (see fig. 1, element 11, wherein the center keys being considered as the area of union as mentioned above).

As per claim 2, Grob *et al.* teaches a portable control, characterised in that the first series consists of keys for controlling translation movements and the second series consists of keys for controlling rotation movements (see fig. 1, element 11, wherein the keys being considered as movements and/or function keys).

As per claim 3, Grob *et al.* teaches a portable control, characterised in that the body comprises a rear part wherein a longitudinally extended recess (12) is defined, having two opposite longitudinal sides, each longitudinal side extending substantially parallel to a respective side surface of the second portion (see fig. 1, element 11, pictorially meet above mention limitation).

² A tool center point (TCP) = A tool coordinate system into coincidence with directions (X, Y, Z) of basic axes of a robot reference coordinate system. A (TCP) serves as an origin, and the system causes a robot to memorize metric values on each motion axis of the robot at the moment of coincidence as setting information for setting the tool coordinate system. The system uses this setting information as information for subsequent robot motion.

As per claim 4, Grob *et al.* teaches a portable control, characterised in that the terminal (6) comprises a safety device of the "dead man" type (13) and that the body comprises a rear part wherein a longitudinally extended recess (12) is defined (see fig. 1, element 11, contains a bottom part of the pendant, which considered to have dead man part), from each of two opposite longitudinal sides of the recess (12) projecting towards the interior of the recess an elongated button (13), each elongated button (13) being part of the safety device (see fig. 1, element 11, as mention above being considered as design choice for holding/gripping).

As per claim 5, Grob *et al.* teaches a portable control, characterised in that it comprises selection means (18), able to be operated manually to select a desired co-ordinate system among a plurality of co-ordinate systems ("Base", "Tool", "Joints") (see fig. 1, element 11, wherein the pendant's keys being considered as selection means) stored in the control unit (5) (see fig. 1, elements 3 and 12), that the operation of the motion keys (14) depends on a selection made through the selection means (18) and that said command signal is aimed at causing the tool (4) to execute a rotation or a translation motion about or along an axis corresponding to the operated motion key (14) (see fig. 1, element 11, bear in mind that the teaching pendant being used to train the robot, thereby implies execution of rotation or translation of motion being perform inherently), in the co-ordinate system ("Base", "Tool", "Joints") selected using the selection means (18) (see fig. 1, particularly the teaching pendant).

As per claim 12, Grob *et al.* teaches a portable control, characterised in that the additional motion control means (40, 41) can be operated to cause a displacement of the predefined point of the tool (TCP) closer, farther away, to the right, to the left, upwards or downwards relative to the position of the terminal (6) (see fig. 1, element 11 as described above, also some keys bellow the display being considered as additional motion/displacement means, wherein displacement being taken as any position, which being interpreted broadly as above), and hence of the user who supports it (7) (inherently the pendant being used by an operator).

As per claim 24, Grob *et al.* teaches a portable control, characterised in that in the first portion (10), laterally to the display device (D), are positioned one or more function keys (TF1, TF2, TF3) (see fig. 1, element 11, particularly the keys around the display).

As per claim 25, Grob *et al.* teaches a portable control, characterised in that in correspondence with an end area of the first portion (11) are positioned a key selector (31) and a mushroom head safety push-button (32) (see fig. 1, element 11, wherein the larger button on the upper right corner being taken for the mushroom head).

Allowable Subject Matter

11. Claims 6-11 and 13-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fail to teach or fairly suggest with respect to claim 6, a portable control that further a displacement of a predefined point tool center point (TCP) of the tool (4) relative to a previously set reference point of a cursor which being indicated as (CO), where the position of the reference point (CO) is capable of being modified, terminal (6) which comprises means (D; T) for modifying the position of the reference point (CO), the signal for controlling the apparatus (1) generated as a result of the operation of the additional motion control means (40, 41) is independent from the co-ordinate system ("Base, "Tool", "Joints") selected through the selection means (18); with respect to claim 23, a portable control, wherein a key (26) for commanding the

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execution of individual steps of a previously set sequence of motions of the robot (1), positioned in particular in the right part of the second portion (11), towards the centre thereof; a plurality of programming keys (20-23) positioned in particular in the left part of the second portion (11) and comprising at least multiple cursor keys (20), a data recording key (21), a data modification key (22) in combination with the other features of the claimed invention.

As to the reference not teaching all the elements of the claims (see fig. 1 of Grob et al. more particularly the control unit 11, wherein all the limitations are embedded into); to better exhibit clear evidence of the control unit 11, see the provided publication (page 3 element 5) of KUKA for a closer look, thereby pictorially; every single limitation is being presented.

13. Applicant's arguments filed 3/22/2006 have been fully considered but they are not persuasive.

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,


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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (571) 272-6964. The examiner can normally be reached on 6:30-5:00 Mon-Thu.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


McDieunel Marc

Wednesday, May 10, 2006

MM/


THOMAS G. BLACK
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